DOCUMENT RESUME

ED 291 854 UD 026 054

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TITLE Juvenile Delinquents, the Martial Arts, and Behavior Modification: An Experimental Study for Social Intervention.
PUB DATE 87
NOTE 57p.
PUB TYPE Reports - Evaluative/Feasibility (142)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Adolescents; Attitudes; *Behavior Modification; *Delinquent Rehabilitation; Group Dynamics; High Risk Persons; Incentives; *Individual Development; *Males; Philosophy; *Physical Education; Self Concept
IDENTIFIERS *Martial Arts

ABSTRACT

Adolescents are particularly open to the influences of interventions that restructure their attitudes and self-concept. This study assesses the influence of martial arts training that incorporates a philosophy of life along with strict discipline. The hypothesis was that such training could positively influence juvenile delinquents and contribute to their rehabilitation. Martial arts training was given to 20 delinquent males. These juveniles, aged 12-17 years, were assessed on the following treatment variables: (1) therapeutic effects that occurred as they helped each other during interactive sessions of the training; (2) knowledge of martial arts gained through the training as reflected in their personal performance on tests; and (3) the attendance record of each participant. The dependent variable was the degree of improvement in the participants' feelings and actions. The findings confirmed the hypothesis. Other conclusions were the following: (1) the participants had a very realistic view of themselves and their performance; (2) the trainees who felt a greater sense of freedom to participate performed better; (3) the best environment for this training with these subjects is one that is strictly controlled and disciplined, and has reinforcement incentives; and (4) more research is needed in the area of assessing the performance of this type of subject. Copies of the questionnaire given to the trainees, and the proficiency tests and a five-page list of sources, are included. (VM)

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JUVENILE DELINQUENTS, THE MARTIAL ARTS, AND BEHAVIOR MODIFICATION: AN EXPERIMENTAL STUDY FOR SOCIAL INTERVENTION

BY

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SUBMITTED FOR PUBLICATION - 1987

UD026054

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INTRODUCTION

The sensitivity of the adolescent to the opinions, attitudes, and values of his peer group and the concomitant dependence of his sense of identity upon the eventual attainment of competence in an adult role render him psychologically vulnerable to numerous negative, as well as, positive influences. An important characteristic of the adolescent is the fluidity of his psychological structure in his struggle to attain a new and more meaningful sense of identity. Thus, although the adolescent may be more psychologically vulnerable to various environmental impingements, the fluidity of his psychological structure nevertheless opens avenues for potentially useful intervention techniques which can modify or ameliorate negative attitudes which he may harbor regarding his worth to self and to society.

The present study will assess the influence of martial arts training, with its strict discipline code and philosophy, on juvenile delinquents. This study differs from the PSAL (Public School Athletic League) in that a philosophy of life will be incorporated into the actual practice of the martial art. Systematically exposing the juvenile delinquent to a rigorous study of martial arts and its philosophy should show positive signs of behavior improvement.

A major assumption underlying the present study is that attitudes can be modified or changed as a result of environ-

mental manipulation, and that as an individual's attitude changes, there is a concomitant change in his self-concept. The PSAL programs dealt with the redirection of the juvenile's energy leaving little for delinquency purposes. With the inclusion of the martial art belt system, the participants can measure their level of progression compared to others in the same environment. The belt system is the incentive of respect for the participants to document their perception on martial art attitudes other than the openness and closedness of the delinquent belief system.

The promotion of this study constitutes the belief that a strict, organized martial arts training program, complete with belt promotion, and philosophical orientations, can have a positive influence on a juvenile delinquent and therefore poses the hypothesis: "DOES MARTIAL ARTS TRAINING AND PHILOSOPHY HAVE AN INFLUENCE ON JUVENILE DELINQUENT BEHAVIOR?"

With the conclusion of this study, a new avenue of awareness could be opened for aiding attitude adjustment in juvenile delinquency and thereby constitute a positive influence in their direction. It becomes necessary that all areas of juvenile rehabilitation be researched in order to put a dent in an escalating problem.

RATIONALE

The present study was designed to test role playing and its effect on law and order attitudes, and social adjustments of juvenile delinquents. It was assumed in this research that delinquents who volunteered for this experiment had committed themselves to the attitude of the martial arts discipline since they had a choice to participate or not to participate.

A juvenile delinquent induced to the rigors of martial arts discipline, philosophy, respect, and application should experience a rise in self-esteem and therefore exhibit a positive shaping of his behavior mode.

This experimenter expects there to be interacting variables involved in producing the greatest amount of attitude change; these variables have an interaction effect on each other depending on the amount of effort put forth by the delinquents. One should not limit each condition to one variable for the study of attitude change. This study is limited to an explanation of correlations between a number of variables and thought to be a relevant extent of attitude change.

The effect of this role playing can be attributed to a number of theoretical explanations, not all of them mutually exclusive:

(A) Change in behavior modes is due to the satisfaction, or reinforcement value of performing a task;

(B) Change in behavior modes is due to the process of satisfaction derived from a positive experience;

(C) Change in behavior modes is due to the process of a rise in the individual's self-esteem.

Included in the above processes is an incentive guideline that is characteristic of all areas of intent focused on human productivity and output. In this process, we assume that acceptance of new ideas is contingent upon an incentive, and that in order to change an opinion, it is necessary to create a greater incentive for making an improvement in a behavior mode. In addition, there are other special incentives involving anticipated rewards which motivate the individual and not tear away the positive learning concepts.

In this research, incentives involved the increase in rank promotion, and an increase of respect that comes from this advancement. In applying this approach, a person becomes motivated to increase the change of acceptance of this new attitude position. The positive condition yields significantly more positive attitudes than the negative condition. It is possible to experience negative conditions when difficulty in grasping martial arts concepts arises. However, this negative condition gives way to positive when the grasping of a difficult concept finally becomes a reality.

In groups over the years, the martial artists gain more and more self-awareness as more and more effort is used. In

this sense, the attitude of the individuals who put in the most effort show more positive change than the individuals who put in less effort. Self-awareness increases in proportion to the greater amount of energy expended by the individuals. The total magnitude of this experience occur in the importance of the pressures and justification which induce the individual to see things he does or does not privately believe. Engaging in behavior consistant with one's attitude results in an attitude change toward consistency with that behavior. When a person is induced to engage in a behavior that he ordinarily would not do, he experiences a negative attitude change until such time that a state of equilibrium is reached. By changing his attitude to conform to the behavior, the negative attitude reduces toward a positive change. This positive condition results in the feeling he experiences as he accomplishes a consistency toward his incentive.

According to years of trial and error, personal observation concludes that an individual who is on the extreme end of delinquency, i.e., those that have not yet been in front of a judge, shows more attitude changes as progression in rank occurs. This observation is based on a total assumption that the individuals will experience greater inconsistency in the over-all learning process, which is totally opposite of their private belief. However, because of their desire to be positively

evaluated in the ranking procedures, motivated individuals are likely to be rational in their behavior and dismiss the experimental procedure as irrelevant. Thus, the individuals receive positive reinforcement through rank advancement and put aside the discrepance between a public position on social behavior and their private beliefs, which are becoming less accessible to them as the reinforcement appeal is demonstrating a greater change in their attitude.

With this explanation, we must look at the actual research mechanism in order to gage a realistic conclusion. All states have martial arts training facilities and youth corrections agencies among a large variety of special services. The combining of these two areas have not, in the past, been allowed to interact to any noticable degree. A redirection of energies, along with a philosophical code of ethics,,could secure a positive behavioral change that could reshape the negative responses to productive services which could be incorporated into society.

Like many other states, Illinois has a decentralized youth corrections program based primarily on the security risk of the detained youth. In Illinois, the minimum security risk of the delinquents are placed in Forestry camps. The youth in these camps, as in other areas of the correctional program, continue to be the clients, the students, the patients, and the objects to be helped. The correctional system is not

designed to allow the youth to be the counselor, the teacher, the doctor, or the helper. The entire process of arrest, detention, hearing, commitment, institutional placement, and institutional life operate upon the youth. Any feelings of negative self worth, inadequacy, or dependence, that were present in the youth are confirmed by the very process. A few notable exceptions exist in programs that are specifically designed to improve the delinquent's self concept.

The present research is designed to examine the treatment potential of intensive interaction between delinquent youths and martial arts disciplines. The effect from this study could have a major impact on delinquency as a problem. The effect on the delinquent behavior will be studied, reported, and used as one criterion measure to describe the outcome of the exposure. Reactions will also be closely monitored in order to preclude any detrimental effects.

The primary concern of this study is to examine the effects, on the self concept of delinquents, of a relationship in which the delinquent perceives of himself given positive exposures to a controlled environment of martial arts. Stated as a hypothesis: Does Martial Arts Training and Philosophy Have An Effect On Juvenile Deliquent Behavior? An examination of this hypothesis is part of a long-term goal of systematically

describing the parameters of effective and efficient treatment and environments designed to help delinquents toward becoming mature social and political beings.

Shoben described how alienation appears to destroy the human being. The loneliness and alienation of Arctic explorers seem to result in psychosis or at least psychotic-like symptoms. This negative extreme of human relationships may not be hate, but indifference to or from other's - alienation.[2]

Landsman, in contrast to Shoben, relates a study on positive human experience. "The 'caring for' is the essence, it seems to me, the stuff which binds men invisibly together..."[3]

The genuine 'caring for' relationships as therapeutic tools seem to have been limited to "professionals". No references to operational use, in this type of study, as a treatment for the delinquent seem to be available in the literature. However, many oriental families, past and present, have long used the martial arts discipline to curb tendencies of misbehavior from members of their family. This oriental belief was the disciplined atmosphere and philosophy of life would deter hostile advances from their children. This change in behavior would happen from the introduction to a different understanding of life and one's self.

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[2]Shoben, E.J. "Love, Loneliness, and Logic" Journal of Individual Psychology, vol. 16, 1958. pp. 11-24.

[3]Landsman, T. "Human Experience and Human Relationships" Personality Theory and Counseling Practice. 1966 pp. 45-52.

Gichin Funakoshi, the Father of American karate, has shaped the lives of many that were in contact with his beliefs. His first meaning stated that karate is a technique that permits one to defend himself with his bare hands and fists without weapons. His second meaning was to study karate and purge himself of selfish and evil thoughts, for only a clear mind and conscience can understand what is received. His third meaning was to strive to be inwardly humble and outwardly gentle, but stand up for the cause of justice.[4]

The total summary of his beliefs was that true karate strives internally to train the mind to develop a clear conscience enabling one to face the world truthfully, while training the body to become a disciplined, well-balanced expression of martial art forms. It is this type of relationship that may aid the delinquent into conforming to a set of guidelines that contain positive growth that leads to experiences unlike the ones that they are accustomed to. The advantage of this type of atmosphere is that the delinquents are introduced to a controlled set of guidelines in which improvement is based on individual progression and not based on peer or group pressures.

Before describing the specific research plan, a set of operational definitions are needed. They are as follows:

Delinquent: a male youth who has been committed to a youth commission in the State of Illinois.

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[4]Funakoshi, G. Karate-Do Kyohan, 1983 pp. 3-10.

Sensi: instructor of martial arts responsible for the environment of programmed instruction.

Belt System: Organized progression in martial arts that includes rank promotion with colored belts which signifies the level of achievement in training.

Types Of Relationships

Continuing Relationship: means face to face contact, or a minimum of twice weekly visits for a period of 6 months between the delinquent and Sensi.

Cojoint Withdrawal: a relationship that both the Sensi and the delinquent voluntarily terminate before 6 months of at least twice weekly visits.

Sensi Withdrawal: a relationship that the Sensi voluntarily terminates without agreement of the delinquent before 6 months of at least twice weekly visits.

Delinquent Withdrawal: a relationship that the delinquent voluntarily terminates without the agreement of the Sensi before 6 months of at least twice weekly visits.

Attitude Adjustments

Maxims Of Karate

Character: to develop moral excellence.

Sincerity: honesty of mind.

Effort: the total work done to achieve a particular end.

Etiquette: the forms to be observed in official life.

Self Control: restraint exercised over one's emotions.

Self Respect:	due respect for oneself, one's character, and one's conduct.
Self Concept:	an individual's perception of himself in relation to other persons and to his environment.
Self Confidence:	confidence in oneself and in one's abilities.

These definitions will be needed so the reader will understand what terminology is meant for a given instance, and what is generally expected throughout the research. The first five areas of attitude adjustment are known as the five maxims of karate. It is these five areas that are stressed during the initial stages of training. The next three areas are what the student should develop as a result of the initial five maxims of karate. Each are systematically related and should be developed during the course of training. Failure to attain the areas of attitude adjustment will reflect in the individual's over-all performance during the training sessions as well as the testing format. Individual's efforts to attain these goals are noted in each training session by their levels of respect, routine, devotion, skill, and advancement in fundamental techniques.

In this research, a group of twenty delinquents (Dt's) will be individually tested with a series of questions dealing with law and order, and social areas. These questions will be scored and recorded for later comparison. The Dt's will

then have frequent visits with the Sensi for instructional training. The schedule of instruction operates on a two day per week visit lasting two hours per session. Dt's will visit the Sensi on Tuesday's and Thursday's of each week, for a total of forty-eight visits during the six month project. (See Appendix A For First Set of Questions)

During this time period, the Dt's will be subject to a complete training program that is sequential in nature. That is, each series of moves that is learned is related to the next set. A total of 235 different techniques each consisting of four to nine parts will be introduced to the Dt's during the forty-eight visits. Tests will be given on a periodic basis to measure the degree of advancement. The tests consist of mental preparation and discipline, plus the physical demonstration of the learned techniques. Each test has an established number of points for the total number of techniques involved. The testing individual must accumulate a certain percentage of points in his demonstration in order to advance to the next level of instruction.

At the end of the forty-eight visits, the first set of questions will be reissued for comparison, the amount of techniques <u>actually</u> learned will be compared to the total number of 235, and the scores on the tests will be evaluated to the total

number of points possible. These scores will give an accurate account of the physical progression and the mental progression during the six month instructional period. The belt system will also be analyzed to see if the Dt's reveal any signs of personal satisfaction and gratification from the rank promotion. These conclusive areas of analysis should indicate if an attitude adjustment has occurred.

During the visits, the Dt's will be engaged in a wide variety of martial arts activities, either as singles or paired with other Dt's. Every attempt will be made in each activity to structure the interaction between the Dt's, and incorporate this interaction in a therapeutic, counseling, or helping fashion. A systematic attempt will be made to help the Dt's and the involved staff understand each other's life space and their involvement within the martial arts realm. Meetings to work out details of implementation will be held with each of the groups and then as a "group of whole" to examine any unresolved operational questions. It is felt that an understanding of the martial arts routine by the Dt's and understanding of the Dt's by the instructional staff is crucial to the effective and efficient collection of data.

The techniques involved in this research will be demonstrated on a video. These techniques, along with the parts that are necessary for performance, will be incorporated in a kata,

or a series of defensive moves against an imaginary offensive attacker. The moves must be precise and performed without flaw. The katas included in this research will also be included in the video. The performance of the katas, successfully, by the Dt's will reflect their basic knowledge and understanding in their concepts of the learned techniques and increase their potential for positive reinforcement.

The population pool consists of delinquent males from a three county area that have been committed to a youth commission in the past. The population chosen for this research will be between 12 and 17 years of age, mixed racially with Caucasian and Negro. Gross physical disorders are not present and psychiatric problems have been screened out during an initial interview of the Dt's in a counseling session. Twenty Dt's will be randomly selected from a pool of volunteers and will remain nameless as part of the agreement for this type of research. An estimated thirty-five volunteers from the three county area will provide the necessary subjects for the completion of this research project. Dt's selected will wear a white gi, a traditional garmet for martial arts training, and a belt associated with the Dt's rank in training. Each Dt will start out with a white belt signifying purity in martial arts knowledge. This gi, already furnished for this project, is to ensure an atmosphere conducive for the Dt's participation and a feeling for coordination of martial arts activities.

Of the large number of treatment variables, three will be selected for primary interest in the present study. The first is the therapeutic effects which may incur to the Dt's as they help each other during days of group interaction in training. Many extra individual practice sessions are needed to be proficient in the learned techniques. The amount of individual practice will be proportional to the Dt's progression and will reflect on the final technique comparison and kata performance.

The second independent variable is the knowledge gained by the Dt's during this research project. This variable will also reflect personal performance on belt tests, kata performance, and technique completion.

The third independent variable is the attendance by the Dt's. Missed sessions constitutes a lower technique ratio and may hamper the final results. Although the attendance factor was highly emphasized, careful monitoring is necessary to help secure an accurate outcome.

The over-all dependent variable is the degree of improvement in the Dt's feelings and actions. First, a primary criteria will be the comparison of the techniques learned and performed in relation to the total techniques that should be completed during this time frame in a traditional session. Second, the test scores are compiled during performances on belt examinations

and compared to the total number of points possible. Third, changes in attitudes from the preinstructional questions given earlier will be noted and compared.

Due to the small sample (N=20 Dt's) a comparative analysis approach will be utilized. The statistical findings may be of secondary importance to other observations that do not lend themselves to statistical analysis. Using this approach will give accurate accounts of the level of improvement compared to the known level of accomplishment expected from a traditional training session.

The significance of this study occurs in three areas. First, it explores the possibility of employing the relationship between two areas that are on a steady rise: martial arts and juvenile delinquency. Second, the potential usefulness of such a procedure can be wide-spread as all states have martial arts facilities and juvenile delinquent agencies. This study is congruent with many "New Careers" concepts in that it serves to introduce youthful law violators to a new occupational role that could be incorporated in area YMCA facilities. Third, it will provide initial exploratory information concerning the importance of some of the variables operative in a non-professional instructor/client relationship and will, at least, tentatively indicate the usefulness of such relationships.

METHODOLOGY

The subjects (Ss) for this study were delinquent male youths of mixed Negro and Caucasian races, ages 12 - 17, and never have experienced martial arts training as a mental or physical discipline. These youths were on a probationary status and volunteered for this research activity. The volunteers were then screened for psychological problems and school achievement scores on the Stanford Achievement Test.

Selection of the Ss for the research was made from the Dt's who volunteered to take the pre-questionnaire and who had Stanford Achievement Test scores that were equivalent in reading skills of grades 6.5 to 9.5. It was decided that this should be the criteria since these Ss would be able to read the questionnaire and answer the questions logically without guessing.

The Rice Attitude scale was passed out to the volunteers chosen for this research project. The same instructions were read to each group before they filled out the questionnaire. Non-volunteers were eliminated from the study due to the fact that it was necessary for the research project to entertain the Ss attitude perceptions before entering the training program.

Among the Ss who volunteered, twenty were randomly chosen based on absence of gross physical problems, Stanford Achievement Test scores, and willingness for participation in this research project.

The instruments used to measure the attitude change among the Dt's attempted to elicit from the Ss an evaluative judgment of the way they perceived themselves as an individual and in their every day task in which they were asked to give their view of competence. It would also give direction on reflected attitudes that was interpreted from the Dt's through past experiences in dealing with the trauma of being classified a juvenile delinquent.

The Rice Attitude Scale (See Appendix A), the first instrument used with the present research project, was devised by Ronald Rice and tested with Florida State prison inmates and inmates in a county jail. This scale is a multidimensional attitude instrument which can be used to measure the attitudes of both inmates and workers in local jail settings.

The attitude scale was designed to measure five attitudes; attitudes toward: society, the legal system, figures of authority, law, and image of self-competence as an individual. The items for the scale were scored by the Likert method.

Likert's method is also called the method of summated ratings. Each item is rated strongly agree (SA), agree (A), undecided (U), disagree (D), or strongly disagree (SD). The rating assigned to each item varies from one to five.

-Readability-

Readability of the scale was estimated to be between fourth and sixth grade reading level. Readability was established by Rice using a method based upon average sentence length and the number of unfamiliar words in the passage.

The test-retest reliabilities of the Rice questionnaire ranges from .75 to .85, with the exception of the attitudes toward inmates (IN subscale) and attitudes toward treatment of inmates (TIN subscale) which had reliabilities of .45 to .84. Test-retest reliabilities for the full scale ranged from .75 to .89.

Tests of construct and concurrent validity were conducted. A factor analysis of subscale items was used to determine whether or not a single factor was measured by the subscale. A factor analysis of the final set of subscales was used to determine the interrelationship of one subscale to another. The Rice Attitude scale was selected as a pretest due to the attitudes the Dt's may have experienced from the treatment of the juvenile system and detention homes.

The Rice Attitude scale will be readministered following the conclusion of this research project in order to document any changes, positive or negative, corresponding with the results of the pretest.

Rice's Attitude scale originally had one hundred forty-four (144) items with six subscales. It was agreed upon that

the delinquent youths would be unwilling to fill out a large number of items on a questionnaire.

Two subscales of IN and some of the questions from the attitude subscale TIN were dropped. It was found that those questions had a very low reliability for this research project. The low correlation for the IN subscale and the TIN subscale are due to the restricted range of the distribution in the correlations. Their standard deviation range was from 4.67 to 6.08 as compared to approximately 8.00 for most of the other subscales. Furthermore, it was felt that these subscales did not really apply to the research; therefore, the revised scale only contained one hundred questions and took approximately twenty minutes to complete.

The second instrument used to determine attitude changes consisted of marked promotions of belt rankings from physical testing procedures. These belt tests were conclusive in nature, in that the individual delinquent had to perform with extreme understandings of the involved techniques demonstrated for that particular level of achievement. Anything not pertaining to the "closed" testing sequence was deemed incorrect and was given a deduction in point value. Therefore, in order to successfully complete a testing sequence, the correct state of mind must be developed and demonstrated in order to manifest a comprehensive performance value to be promoted to the next higher level of instruction.

This testing concept has a remarkable reliability factor due to the fact that it has been used for this purpose since the inception of this style of martial arts. Students being tested had to maintain a certain composure during this testing time. Any deviation from this expected attitude was deemed inappropriate and a failing score was recorded. A repetition of the techniques and attitude discipline was incorporated until the next testing day.

A comparison of the number that conformed to this testing philosophy to the actual number will determine the extent of the attitude change made by the Dt's through this research project. Each Dt that fails a testing sequence will lower the comparison. Only when a delinquent demonstrates his understanding of techniques and mental discipline, will this number be maintained.

Two weeks after filling out the prequestionnaire, the Dt's were put together for the first time as a group. An orientation session was needed to explain the details of the expectations from the individuals. A gi was distributed to each individual to wear throughout the visitations and training sessions. Preparation was made for the first of 48 training sessions totalling 96+ hours of instruction time.

During each session, the Dt's were instructd to a series of techniques and attitudes necessary to perfect before the

first testing session (See video for a complete demonstration of the techniques for the research program). A total of 235 different techniques should have been perfected by the Dt's during the 48 visits. Each Dt was responsible to practice outside the visits in order to aid their performance of the technique. It was readily recognized when the Dt's failed to practice on their own. Learned techniques should not have to be retaught. When a Dt failed to practice outside the original visits, reteaching was necessary and valuable time was wasted.

A total of four tests were given to measure the performance levels of the Dt's (See Appendix B for example of tests given). The techniques are graded from 0 to 5, with 5 being excellent, 4 being good, 3 being average but needs work, 2 being passing but needs to concentrate heavily on technique performance, 1 being poor, and 0, not knowing technique. At the end of the testing session, the Dt's performance level was evaluated and scored. The Dt must then successfully perform a kata, a defensive set of moves from an imaginary offensive opponent, in order to pass the test and be promoted to the next level of instruction. Failure to successfully perform the kata or katas designated for the level of instruction automatically results in a failing grade, no matter what score was recorded

earlier. A new kata is introduced for each level. The katas become more demanding as the level of instruction increases (See video for data demonstration). The Dt's must perform physically and mentally in order for promotion to take place.

During the research session, an independent video tape was constructed with two Dt's in order to have exposure to another area of physical and mental discipline related to, but not part of the original research. During the course of the 33 hour rehearsal schedule, martial arts moves were incorporated to music and performed in front of audiences. At first, the Dt's could not grasp the idea of moves timed with music. However, as time went by and rehearsal became more demanding, the concept became more clear. The Dt's practiced with intense desire to perfect a seven minute presentation. Once they had the "skit" timed with the music, performances were scheduled in order to document their actions under pressures they were not accustomed to. The first performance was scheduled at a local junior high school in front of about 240 junior high age students. The audience was unclear of the purpose at first, but responded well at the end of the performance with a standing ovation. This character builder aided the Dt's into more rehearsals as they began to experience positive reinforcement and feedback from their work.

Another performance was scheduled in front of the local Chamber of Commerce. Ironically, many of these members had negative experiences with delinquents. During the course of the "skit", the commerce members realized a change for the good which was immediately felt by the Dt's. This positive feedback left a very good impression; something they again were not accustomed to and had a little trouble accepting at first.

Their final performance was scheduled in front of the Illinois Theater Board held in Bloomington, Illinois. The Dt's proceeded to rehearse to perfect their level of performance. This would be the first time that their "skit" would be critiqued from people outside this research program. This "skit" had become the symbol for success for many of the Dt's in the research program.

Competition was the catalyst for perfection of moves and timing. After the performance, the Dt's had a feeling of accomplishment. This task that seemed so large at the beginning was only a stairstep to something very rewarding: personal satisfaction and gratitude.

Many extras that made up the "skit" were introduced by the Dt's as added attractions. Also, impromptu moves and techniques were also established making the Dt's think about every detail of the "skit" if something should go wrong.

ANALYSIS OF DATA

Data gathering for this research project took approximately six months to complete. The video program was completed in three months. The data compiled was taken from two sources. The first source was the pretest given prior to the research, and again at the end of the research to measure any change in attitude toward given areas. Although this was not correlated to represent a total picture, it was necessary as a guideline to aid in the over-all understanding of the findings from the main body of the experiment.

The second source of data was obtained from the number of delinquents that fell in each sequence of the testing catagories compared to the actual level of achievement for this time period. Data was also gathered from the total number of techniques learned and performed by the Dt's to the total number of techniques that should have been learned throughout this research project.

The Pearson Product Movement Correlation (r) was used as a measurement on the pre- and post-test of the Rice Attitude Scale. The correlation of r = .62 was logged between the two groups of scores. This method of measurement was used for correlation between the pre- and post-test since a comparison was needed from a before and after perspective on the question-

naire. This correlation was compared and interpreted as having a slight measurable change toward a more positive outlook on sociological factors and their own sense of value. This change could be noted as an expectation that a greater adjustment is partly due to conformity in a different environment. While it may be true that persons do strive to maximize consistent linkages among their beliefs, it is also true that the nature of most experimental situations make it very difficult for a subject to compartmentalize his beliefs and to restrict their linkage. It may also be noted that volunteer subjects may show more attitude change than non-volunteers. This is due to the attitude the subject has about a particular situation. One who volunteers has a better displacement for accepting suggestions than one who has the idea of being forced into certain situations for which he has mixed opinions. However, the opposite effects can also be observed when the subject equates changing with psychological weakness.

Due to the low number of respondents, a comparative analysis approach was used in order to correlate the number of Dt's that fell within the testing levels used in this research. A total of 7/20 Dt's made it to the expected level of accomplishment (See Table 1). This marks a .35 representation of achievement from the total testing program.

TABLE 1

Distribution of respondents through the four testing areas plus the scoring percentage on the tests compared to the actual number.

Level	Test-1	%	Test-2	%	Test-3	%	Test-4	%	Ta/Pt	%a	% Finish
6th	--	--	--	--	--	--	7/20	.35	298/390	.76	
7th	--	--	--	--	9/20	.45	5/20	.25	177/240	.73	17/20 .85
8th	--	--	13/20	.65	6/20	.30	3/20	.15	81/115	.70	
9th	16/20	.80	4/20	.20	2/20	.10	2/20	.10	24/35	.70	% Not Finished
10th	4/20	.20	3/20	.15	1/20	.05	1/20	.05	16/35	.45	3/20 .15
N.C.	--	--	--	--	2/20	.10	2/20	.10	--	.00	

In viewing this chart for progression through the various levels of tests, the Dt's made attempts to challenge the highly disciplined environment. At each level of instruction, more Dt's succumbed to the rigors of expectation and performance. Of the original twenty (20) who initially volunteered and filled out the questionnaire, three (3) never made it past the first level of instruction. In fact, two (2) of those three (3) dropped out of the experiment completely after failing at the first level of techniques. This dropout could have been students that realized nothing drastic could happen to them if they dropped out of the research. Also, they might have felt pressures from their "peers" in not being able to grasp the ideas and concepts of this research project. At any rate, the other Dt's managed to finish out the entire 48 visits and complete the research project. Even though the one Dt never made it past the first level and was not statistically a success, the factor of personal commitment and accomplishment was far more conclusive than numbers. His trying attitude was a mark for success in itself.

It was interesting in noticing the level of distribution throughout the course of this project. Each Dt that remained tried to maximize their potential, but was to remain at that level in which the techniques taught equalled their performance tendencies. Once their total potential was reached, the Dt

was locked at that testing level from an inability to comprehend techniques successfully and perform at the next level.

At the end of the research session, the level of achievement from the Dt's was logged. This level is the total test scores of the Dt's (Ts) as compared to the total possible points (Pt) that was expected for the Dt's. In every case, except for the one at level 10, each level of progression posted a .70+ achievement mark. This demonstrates an acceptable improvement correlation since this promotes a .20 finding above less potential marks of capacity. With this type of observation, the potential for further improvement could be incorporated in a larger study.

The third level of comparison was that of the techniques learned by the Dt's (Lt) for each testing level with that of the total number of techniques possible (Tt). In looking at the columns (See Table 2), a marked decrease in comparison from test 1 to test 4 is noticed. This is due to the difficulty level experienced from an increase of required and difficult techniques. A decrease level of .15 from the 1st level of test 1 to the first level of test 2, .20 from the first level of test 2 to the first level of test 3, and .10 from the first level of test 3 to the first level of test 4 was recorded. The lesser decrease from test 3 to test 4 is interpreted as a conformance to the research environment. A total decrease

TABLE 2

Comparison of Techniques Learned
To Total Number of Techniques

	TEST 1				TEST 2				TEST 3				TEST 4			
	Np	Lt	Tt	%	Np	Lt	Tt	%	Np	Lt	Tt	%	Np	Lt	Tt	%
6													7/20	1645	4700	.35
7									9/20	1485	3300	.45	5/20	825	3300	.25
8					13/20	1222	1880	.65	6/20	564	1880	.30	3/20	282	1880	.15
9	16/20	608	760	.80	4/20	152	760	.20	2/20	76	760	.10	2/20	76	760	.10
F	4/20	0	0	.00	3/20	0	0	.00	1/20	0	0	.00	1/20	0	0	.00
D									2/20	-	-	---	2/20	-	-	---

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of .45 was registered from the beginning of the research to the final session. This was due to the actual number of Dt's that made the completed range of the research. This decrease was expected, however, the results were hampered by the drop-out of the two Dt's during the midway point of the experiment.

-Hypothesis- "DOES MARTIAL ARTS TRAINING AND PHILOSOPHY HAVE AN INFLUENCE ON JUVENILE DELINQUENT BEHAVIOR"

Conclusive support material of the research program is noticed in the final columns of table 1 and table 2 because the regression of stats follow a decreasing numerical order. This is interpreted as supportive analysis in that the higher stats should be at the top of the scale as one progresses through the testing sequence in this type of system. Furthermore, this fact follows the paths of others not labeled a juvenile delinquent and substantiates the concept that Dt's can progress when given an environment conducive for proper supervision and instruction.

The present experiment in the field may have been partly responsible for obtaining these significant results. The variables in this experiment were not as strictly controlled as they would have been in a laboratory setting and could not have been. It is felt that this research project on attitude change, especially with supportive findings, should be replicated in a laboratory setting to see if the same results could be obtained on a larger scale.

-Discussion-

With reviewing the positive results of the total research, it was logged that the hypothesis was confirmed, but should be tested on a larger scale in a controlled laboratory setting in order to analyze the results for comparison. Although the statistical data was conclusive in a positive setting, it cannot significantly report the visual change in attitude felt by the examiner throughout the research program.

Contrary to other studies with negative results, the present research shows that the Dt's have a fairly realistic view of themselves and their performance as an individual. In addition, the video performances had a positive effect for the Dt's involved, and the Dt's within, the research project.

Following is a discussion of the major hypothesis of the present experiment dealing with attitude change. Reasons for the results not being statistically significant will also be discussed.

It was assumed in the present experiment that delinquents who volunteered had thus committed themselves to the attitudes of a strict martial arts environment since they had the choice to participate or not to participate in this research. It may have been an erroneous assumption on the part of the examiner to assume that delinquents having been exposed to the juvenile court system, would volunteer for research with no alternative

motives. First of all, being on a probationary status, these Dt's were in a highly structured environment; an environment in which they had no choice in choosing to belong or not to belong except for committing an offense against society. Conformity to this probationary environment was imperative since their other alternative was a youth detention facility.

The very nature of this type of life in a detention facility tends to alienate the Dt's and handicaps the treatment process. For the delinquent, the instruction, despite its claim to the contrary, is an abnormal situation, filled with hostilities and frustrations, where he is forcibly separated from all loved ones and familiar associations, subjected to restraints which he resents and compelled to associate with equally resentful youths. Although the staff may seek to help him and to modify his behavior, he tends to resist, throw in his lot with his fellows, find security and satisfaction in their approval and admiration, conform to their common beliefs and attitudes and join with them in evading rules and annoying and deceiving staff members. Most students play the "con-game" by doing what is required of them, and no more. The reason for this is simple: the sooner and better they conform to the wishes of the staff, the sooner they will be released.

In many detention facilities, a token economy exists. In brief, positive behavior and attitudes are reinforced by

good reports about the delinquent, or a promise to pay a specific amount of tokens. Undesired behavior or attitudes are negatively reinforced by bad reports. Many detention staff members serve as reinforcing agents and can issue the appropriate report about the delinquents. The means of attaining the good reports and situations involving negative reports are clearly defined for each delinquent before he enters the formal p ram at the detention facility.

Even though the students were told by the examiner, while passing out the questionnaire, that their participation was to be voluntary, they may have felt compelled to participate. They may have felt they should participate since the questionnaire was to be administered in the presence of their probation officers who evaluates the delinquents with reports.

From this formulation, it follows that the amounts of attitude change are functions of the extent of the individual's commitment to the chosen course of action. If the individual feels no real commitment to, in involvement in, the choice, the decision will produce little effect. On the other hand, if the individual has freedom of choice, one would expect a positive relationship between commitment and performance. An individual's perception of control over his own behavior is a mediating variable in generating greater performance effect. The Dt's te i this perception, or feeling, violation, and they perceive it as the conscious control of one's own behavior.

These experiments strongly indicate that decision freedom is an important determinant of performance under conditions of counter-attitudinal advocacy. Moreover, it seems plausible to conclude that, all other things being equal, the greater the freedom to encode belief-discrepant communication, the greater the performance rate and subsequent attitude change.

-Size of the Sample-

There would have been a more significant difference in the scores of the two groups if the size of the sample had been larger. With a sample of twenty (20) subjects, it was difficult to obtain a realistic formula for comparison. However, promising statistics were revealed that could open the door for a more extensive research program of a laboratory controlled environment. Also, due to the reading level required to complete the pre-post tests, only students with a reading ability of grades 6.5 to 9.5 on the Stanford Achievement Score could be used for the research. The number of subjects with the 6.5 and above level was significant for the pre- and post- questionnaire in order to log realistic statistics and avoid an interpretation based on guessing.

It is interesting to visualize the attitudes and actions at some detention facilities compared to the attitudes and actions confirmed at the end of this experiment. Life at a detention facility appears to be peer-centered. Aside from the boy's interaction with his teacher, contact with the staff

on an individual basis is limited. However, the students are constantly interacting with one another, as is the case with young people, generally. Among the boys, a set of values and understanding develops; a subculture with distinct characteristics. Communication within this subculture is very fast, and the values of peer groups are very strong. If the peer group had negative views toward society and individual values, this may have a counter-balancing on any positive effect of rehabilitation, and taking a stand for individual perception.

Psychologists, who should be experts in understanding behavior, have been particularly naive in understanding how a subject feels in an experiment and how the subject manages to adapt to these feelings. There is a role subjects are expected to play in our society, and many subjects will try to fill this role. However, in many detention facilities, delinquents may lose their identity and any hope for rehabilitation may go with this loss. Only through a direct understanding of the need of each delinquent will progress in rehabilitation be noticed. Unfortunately, with the rise of juvenile delinquency reaching epidemic proportions, this "one on one" approach becomes a wish list with a low probability statistic. It is with this need for a "one on one" approach and positive reinforcements that this research experiment was conducted.

CONCLUSION

It has been maintained throughout this experiment that a strictly controlled, disciplined environment with reinforcement incentives would aid in the development and understanding of positive attitude changes in juvenile delinquents. Many detention facilities cannot, or do not, operate with the best interest of the delinquent in mind due to the lack of appropriate funding, or too large a number of delinquents that are detained. It is conceived, through this experiment, that delinquents can be reached and molded into productive members of society before they reach a stage of non-rehabilitation. These research findings produce a valuable tool in offering hope for certain juveniles by reemphasizing a philosophy of behavior that is conducive to positive reinforcement and public acceptance.

In this age of uncertainty for job opportunity and family reinforcement, alternative modes of direction must be offered to individuals on the road to delinquency in order to prevent a misplacement of individuals in detention facilities that could be reshaped by alternative programs, such as this experiment concluded. The amount of funds appropriated could be drastically cut by reaching these individuals early enough to prevent being labeled a juvenile delinquent and face the procedure of this system.

The main values of this experiment lie not in whether or not the results were statistically significant, but that it was carried out in the field, not in the laboratory. This experiment should be followed up in the future with a different population in an experiment under laboratory conditions to compare the results in a more variable controlled environment. Perhaps high school or college students, under different environmental settings, would be free to respond with less alternative motives. A follow-up experiment should have more control of the variables involved; such as, one person passing out the questionnaire to all the students and that person preparing the subjects for the research. Yet, the variables should not be so controlled as to produce conformitive artifacts. This would eliminate individual, experimental variables presented to the subjects.

The high intercorrelations between the examiner and the subjects' performance estimates indicated that some characteristics were felt by the subjects and were communicated to the examiner. There needs to be more research in this area between reality of the subjects and evaluation of performance. The high level of argument may stimulate further study in the field of reality testing by delinquents.

With the rise of juvenile delinquency facing many states in the union, any developmental system that aids in the decline or control of this rising figure should be welcomed by those agencies who face this situation on a daily basis. This research project could have potential as that particular segment of martial arts training is necessary in handling many of today's juvenile delinquents and their problems for recuperation into society as a productive member.

APPENDIX A

1. Society makes the world a "dog-eat'dog" place to live.....SA A U D SD
2. Laws make a community safer.....SA A U D SD
3. Breaking the law is OK; the sin is getting caught.....SA A U D SD
4. It is all right to break the law to help your family.....SA A U D SD
5. Laws were only made for the poor man.....SA A U D SD
6. Laws are a man's best friend.....SA A U D SD
7. I wish I could be someone else.....SA A U D SD
8. Inmates who work should be paid for it...SA A U D SD
9. The law officer is out to frame you.....SA A U D SD
10. Society gives the poor man a raw deal....SA A U D SD
11. The only way to get ahead is to break the law.....SA A U D SD
12. Laws are OK, but the courts are crooked..SA A U D SD
13. One can be proud of our courts.....SA A U D SD
14. Jail workers are only in it for the money.....SA A U D SD
15. Jail workers want to help inmates.....SA A U D SD
16. Society only cares for you if you have a lot of influence.....SA A U D SD
17. Society looks out for jail inmates.....SA A U D SD
18. Society allows the newspapers to mark a man who has a record.....SA A U D SD
19. After being arrested, inmates should lose their civil rights.....SA A U D SD
20. Most laws are fair.....SA A U D SD

21. Judges treat everyone about the same.....SA A U D SD

22. What society needs is more law officers to enforce the laws.....SA A U D SD

23. I rarely get my bills all paid.....SA A U D SD

24. Society will never understand the inmate..SA A U D SD

25. The courts should let the inmates out sooner than they do.....SA A U D SD

26. I am proud of most things I have done.....SA A U D SD

27. When I believe in something, I do it.....SA A U D SD

28. New programs are needed to rehabilitate inmates.....SA A U D SD

29. Jail workers envy smart inmates.....SA A U D SD

30. I wish I could like myself better sometimes.....SA A U D SD

31. I can look up to myself.....SA A U D SD

32. Society wants to help inmates be rehabilitated.....SA A U D SD

33. Society should let a man do what is natural for him to do.....SA A U D SD

34. The law protects our civil liberties.....SA A U D SD

35. It is easy for me to take a stand on things I believe.....SA A U D SD

36. A man with a record still gets a fair trial.....SA A U D SD

37. Getting things to work right is a problem for me.....SA A U D SD

38. Laws are good, even if you don't have money.....SA A U D SD

39. Good laws do no good because the courts are unfair.....SA A U D SD

40. I seem to keep my debts paid better than most.....SA A U D SD

41. The law makes us more free to live happily.....SA A U D SD

42. I put on a front around other people.....SA A U D SD

43. Society is set up to help the poor man better himself.....SA A U D SD

44. If society was just, everybody would be in jail.....SA A U D SD

45. I think highly of myself.....SA A U D SD

46. Unjust laws have put most people in jail..SA A U D SD

47. The law officer is on your side.....SA A U D SD

48. Being mean is the way to rehabilitate inmates.....SA A U D SD

49. The laws work well most of the time.....SA A U D SD

50. My girlfriend and I don't get along very well.....SA A U D SD

51. You have to break the law in order to get ahead.....SA A U D SD

52. Most laws are lousy.....SA A U D SD

53. I like "me" just as I am.....SA A U D SD

54. A man gets justice under the laws we have today.....SA A U D SD

55. The law only protects the rich man.....SA A U D SD

56. Laws promote a healthy society.....SA A U D SD

57. I do not approve of the way I am.....SA A U D SD

58. Society gives you nothing but taxes you anyway.....SA A U D SD

59. Laws are wonderful.....SA A U D SD

60. I am pretty well satisfied the way I am...SA A U D SD

61. I can usually work my problems out.....SA A U D SD

62. Law officers want to keep inmates out of jail.....SA A U D SD

63. I would like to be different.....SA A U D SD

64. Laws are no good without a clever lawyer..SA A U D SD

65. I find myself doing things I do not believe in sometimes.....SA A U D SD

66. The law is unfair to most inmates.....SA A U D SD

67. Laws are good rules to live by.....SA A U D SD

68. Society is to blame for inmates' problems.SA A U D SD

69. Society holds a whip hand over a man with a record.....SA A U D SD

70. The legal system does not care about the inmate--they only care about his money....SA A U D SD

71. Law officers are in it for the money.....SA A U D SD

72. It is all right to break the law if you do not get caught.....SA A U D SD

73. I get along well with my family.....SA A U D SD

74. Managing money is one of my problems.....SA A U D SD

75. Society can disrupt a man's family while he is an inmate.....SA A U D SD

76. Jail workers are to be admired for the fine work they do.....SA A U D SD

77. Society envies the things inmates know how to get.....SA A U D SD

78. Work-release lets inmates off too easy....SA A U D SD

79. People should not know when a person has a past record.....SA A U D SD

80. The only way to win in court is to have lots of money.....SA A U D SD

81. Law officers and judges listen to the inmate's side of the story.....SA A U D SD

82. If society were just, most inmates would be turned loose.....SA A U D SD

83. The law protects everyone about the same..SA A U D SD

84. Jail workers want you to trust them so they can convict you.....SA A U D SD

85. Law officers do not try to look big and make you look little.....SA A U D SD

86. People bug me, so I bug them.....SA A U D SD

87. People are never bigger than the law; it must be obeyed.....SA A U D SD

88. The courts put the right people in jail...SA A U D SD

89. The way to win in court is to have pull with the judge or jury.....SA A U D SD

90. All society wants to do is help inmates...SA A U D SD

91. I can't seem to make ends meet.....SA A U D SD

92. Society allows the business man and loan people to cheat the poor.....SA A U D SD

93. I don't let my friends lead me into bad situations.....SA A U D SD

94. Courts are a big joke.....SA A U D SD

95. Often I start a project and never find time to finish it.....SA A U D SD

96. Society owes an inmate another job when he gets out.....SA A U D SD

97. Society does not care how the inmate feels.....SA A U D SD

98. Society should ask inmates which laws are bad.....SA A U D SD

99. The law is against the man once he is arrested.....SA A U D SD

100. Society wants to help inmates help themselves.....SA A U D SD

APPENDIX B

KU-KYU
9th DEGREE WHITE BELT TEST

1. ____Attention Stance
2. ____Bow
3. ____Horse Stance
4. ____Basic Punch
5. ____Zen Stance
6. ____Basic Walk
7. ____Basic Breathing

Total of 35 points - need 24 to pass Ku-Kyu belt test

COMMENTS

5-Excellent
4-Good
3-Average, but needs more work
2-Passing, but needs to concentrate on the technique
1-Poor
0-Did not know the technique

HACHI-KYU
8th DEGREE WHITE BELT TEST

1. ____Attention Stance
2. ____Bow
3. ____Horse Stance
4. ____Basic Punch
5. ____Zen Stance
6. ____Basic Walk
7. ____Basic Breathing
8. ____Down Block
9. ____Up Block
10. ____Front Snap Kick
11. ____Side Thrust Kick
12. ____Shuto Block
13. ____Forward Punch
14. ____Opposite Punch
15. ____Terms
16. ____Form 1 of the Shuto-Ryu System

Total of 80 points - need 55 to pass Hachi-kyu belt test

COMMENTS

5-Excellent
4-Good
3-Average, but needs more work
2-Passing, but needs to concentrate on the technique
1-Poor
0-Did not know the technique

7th Kyu Test
Yellow Belt

1.	Attention Stance_____	COMMENTS
2.	Horse Stance_____	
3.	Basic Punch_____	
4.	Ready Position_____	
5.	Zen Stance_____	
6.	Basic Walk_____	
7.	Basic Breathing_____	
8.	Down Block_____	
9.	Up Block_____	
10.	Front Snap Kick_____	
11.	Forward Punch_____	
12.	Opposite Punch_____	
13.	Roundhouse Kick_____	
14.	Out-side - In-side Block_____	
15.	In-side - Out-side Block_____	
16.	Side Kick_____	
17.	Roundhouse Punch_____	
18.	Shuto Block_____	
19.	Back Kick_____	
20.	Block-n-Counter_____	
21.	One-step Sparring_____	
22.	Basic Breaks 1-4_____	
23.	Basic Fall_____	
24.	Count to Ten_____	
25.	Kata 1_____	
	Kata 2_____	

125 points possible - need 75 points to pass belt test

5-Excellent
4-Good
3-Average, but needs more work
2-Passing, but needs to concentrate on the technique
1-Poor
0-Did not know the technique

6th KYU TEST

1. attention stance_____
2. horse stance_____
3. basic punch_____
4. ready position_____
5. zen stance_____
6. basic walk_____
7. basic breathing_____
8. down block_____
9. up block_____
10. front snap kick_____
11. forward punch
12. opposite punch
13. roundhouse kick_____
14. out-side inside block_____
15. inside out-side block_____
16. side kick_____
17. roundhouse punch_____
18. shuto block_____
19. back kick_____
20. back fist_____
21. spear-hand thrust_____
22. front thrust kick_____
23. reinforced block_____
24. block-n-counter_____
25. one-step sparring_____
26. basic breaks 1-6_____
27. combinations 1-4_____
28. slow sparring_____
29. kata_____
    1
    2
    3
30. terms_____

TOTAL OF 150 POINTS - NEED 100 TO PASS

5-Excellent
4-Good
3-Average, but needs more work
2-Passing, but needs to concentrate on the technique
1-Poor
0-Did not know the technique

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